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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/575,104

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Ulrich Simon

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
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ALEXANDRIA, VA 22314

EXAMINER

DOLLINGER, MICHAEL M

ART UNIT

PAPER NUMBER

4171

NOTIFICATION DATE

DELIVERY MODE

03/31/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/575,104	Applicant(s) SIMON ET AL.	
	Examiner MICHAEL DOLLINGER	Art Unit 4171	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-21 is/are pending in the application.
4a) Of the above claim(s) 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/6/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 2 and 3 are objected to because of the following informalities:
unclear terminology. Appropriate correction is required.
2. Line 2 of claim 2 includes a crossed out "is" without any term to replace it as the transitional phrase. Examiner suggests claim 2 be amended to include a transitional phrase such as "is" or "comprising."
3. The term "amine-regulated" in line 2 of claim 2 and line 2 of claim 3 is unclear. For purposes of the examination, examiner takes the position that this term means "amine-terminated" on the basis that in US application 09/973,890 (from patent US 6,784,227) which has similar subject matter and one common inventor, Ulrich Simon, the term "regulated" was replaced with "terminated" in applicant's amendment submitted on March 31, 2004.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 1-12 and 14-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term composition is confusing as the invention as claimed is not a composition, but two layer adhesive structure on a substrate. A composition is the kinds and

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numbers of materials that make up a mixture, and does not involve mixtures of phases, dots, layers etc., as recited. Applicants may claim as their invention a two component adhesive composition in which only the materials of the two layers are recited, a multilayer adhesive structure using the type of adhesive claimed, or the like. For the purposes of examination, examiner takes the position that the claims are directed to a multilayer adhesive structure.

6. Additionally, in claim 1, it is unclear whether the phrase "in accordance with the double dot technique" is a limitation on the invention"

7. Claim 1 recites the limitation "the lower dot" in line 4. There is insufficient antecedent basis for this limitation in the claim. If the above mentioned amendment is made then there will be sufficient antecedent basis for "the lower dot." If the above mentioned amendment is made the limitation "upper dot" in line 3 will also require the limitation "the."

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ

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619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1-3, 5-12, 15, 16, and 21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9, 11, 13-15, 17, and 18 of copending Application No. 10/575110 in view of Hefele (US 5,153,064). The copending claims outline the same invention as the instant claims, with the only difference being that the instant claims require a lower dot comprising polyester and the copending claims require the lower dot comprising an amine-terminated copolyamide.

10. Hefele teaches a two layer adhesive structure analogous to those claimed in the instant application with a lower dot comprising a copolyester and an upper dot comprising a copolyamide (Examples 3 and 4). These adhesive structures have improved adhesion values (see Table, column 9) over structures with upper and lower dots comprising copolyesters (Examples 1 and 2). Hefele also discloses that copolyester hot-melt adhesives exhibit better washing stability than copolyamide hot-melt adhesives (column 2, lines 28-30).

11. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the copolyester lower dot taught by Hefele in

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the multilayer adhesive structure in the copending claims with the reasonable expectations of improved adhesion and washing stability.

Instant Claim	Corresponding Copending Claims
1	1
2	2,3,4
3	2
4	-
5	5
6	6
7	7
8	8
9	9
10	11
11	13
12	14
13	-
14	-
15	17
16	18
17	-
18	-
19	-
20	-
21	15

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

12. Claims 1-9 and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simon et al. (US 6,300,413 B1), and further in view of Hefele (US 5,153,064).

13. Regarding claims 1, 2, 4 and 5, Simon et al. disclose a hot-melt adhesive composition for coating, lamination, or coating and lamination of a sheet-like structure in accordance with the double dot technique with an upper and lower

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dot (see Example). Simon et al. disclose the aforementioned structure wherein the upper and lower dots comprise either an amine-terminated copolyamide (column 1, line 10) or an OH-terminated copolyester (column 1, lines 21-22), and further comprising a crosslinker (column 2, line 42), and acrylic and polyurethane dispersions (column 1, line 56-57).

14. Regarding claim 3, Simon et al. disclose identical ranges for the physical properties (column 3, lines 25-30).

15. Regarding claims 6 and 7, Simon et al. disclose crosslinkers that are solid isocyanates with more than two free NCO groups and a melting range of 100-130°C (column 3, lines 3-5).

16. Regarding claim 8, Simon et al. disclose a crosslinker that is an epoxide with the exact same properties claimed (column 3, lines 5-10).

17. Regarding claims 9 and 19, Simon et al. disclose a trimerized diisocyanate which has been passivated and processed as an aqueous paste (column 2, lines 44-48). Simon et al. also disclose a solid isocyanates crosslinker with more than two free NCO groups (column 3, lines 3-4).

18. Regarding claim 14, Simon et al. disclose copolyester based on terephthalic acid, isophthalic acid and butanediol, or butanediol in combination with small amounts of other diols (glycols) (column 3, lines 35-38). This disclosure anticipates the combinations of glycols claimed in claim 14. Examiner notes that PTHF is also known as polytetramethylene glycol and is considered a glycol in organic chemistry practice.

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19. Regarding claim 15, Simon et al. disclose a method of coating or laminating sheetlike structures according to the double dot method in claim 1 in the examples in columns 3-5.
20. Regarding claim 16, Simon et al. disclose an interlining material for clothing comprising a material and a coating or lamination according to the double dot method of claim 1 in the examples in columns 3-5.
21. Regarding claims 17 and 18, Simon et al. disclose polyurethane and acrylate dispersions (column 1, lines 55-57). Examiner notes that acrylates are derivatives of acrylic acids and the species of "acrylate" anticipates the genus of "acrylic," as claimed.
22. Regarding claim 20, Simon et al. discloses a crosslinker that is a trimerized diisocyanate which has been passivated by extrusion with an atactic polyolefin (column 2, lines 44-47).
23. Simon et al. fail to disclose a multilayer adhesive structure which combines a lower dot comprising a copolyester with an upper dot comprising a copolyamide.
24. Hefe teaches multilayer adhesive structures in accordance with the double dot method analogous to those structures disclosed in Simon et al. with lower dots comprising copolyesters and upper dots comprising copolyamides (Examples 3 and 4). These structures show better adhesion values (see Table, column 9) than analogous structures in which both upper and lower dots are copolyesters.

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25. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used either the copolyester composition taught by Hefele or the copolyester material disclosed in Simon et al. as the lower dot in combination with an upper dot comprising a copolyamide to form a multilayer adhesive structure with the reasonable expectation that it would have improved adhesion.

26. Claims 10 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simon et al. and Hefele as applied to claims 1 and 15 above, and further in view of Kohlhammer et al. (US 5,977,244).

27. Simon et al. and Hefele fail to teach the epichlorohydrin as a crosslinker and also fail to teach the acceleration of crosslinking with a catalyst.

28. Regarding claim 10 Kohlhammer et al. disclose epichlorohydrin products as crosslinkers for textile molding compositions (column 3, lines 47-50).

Regarding claim 21, Kohlhammer et al. disclose crosslinking catalysts for the textile molding composition (column 3, lines 58-60).

29. By definition, catalysis accelerates chemical processes by reducing activation energies of reactions. It would have been obvious to one of ordinary skill in the art at the time the invention was made to catalyze the crosslinking reaction in Simon et al. with the reasonable expectations of decreased processing time and energy.

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30. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Simon et al. and Hefele as applied to claim 4 above, and further in view of Mattor et al. (US 4,282,054). Simon et al. and Hefele fail to teach using a reactive lower dot as a strikethrough barrier. Mattor et al. further teaches the use of a crosslinkable resin as a strikethrough barrier on a sheetlike structure (column 1, liners 53-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a crosslinkable polymer lower dot as a strikethrough barrier.

31. Claim 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Simon et al. and Hefele as applied to claim 4 above, and further in view of Hiratsuka et al. (US 5,019,347). Simon et al. disclose application of a lower dot as a paste comprising a passivated isocyanate (column 2, lines 44-48) but fail to disclose application of the lower dot in halftone formation.

32. Hiratsuka et al. teach application of an multilayer adhesive coating applied to a sheetlike structure in a formation of dots distributed microscopically at random and of varying size and shape but appear essentially uniformly in total (Column 4, lines 18-21). Examiner takes the position that any non uniform distribution of dots that appears essentially uniform in total is considered the halftone method. Hiratsuka et al. teach that the adhesive area ratio can be

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adjusted (column 4, lines 28-34) and henceforth optimized to the thickness of the substrate by adjusting the size and width of the dots (column 4, lines 38-41).

33. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the halftone method with the multilayer adhesive structure of claim 4 with the reasonable expectation of optimizing the adhesive area ratio to the thickness of the sheetlike structure to which the adhesive is applied.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL DOLLINGER whose telephone number is (571)270-5464. The examiner can normally be reached on M-Th7:30-5:00, every other F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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